

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN S. CULLEN and GEORGE E. MCKEDY

Appeal No. 2002-0195
Application No. 09/174,977

ON BRIEF

Before PAK, WALTZ, and PAWLIKOWSKI, Administrative Patent Judges.
WALTZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the primary examiner's final rejection of claims 22 through 39, which are the only claims pending in this application.¹ We have jurisdiction pursuant to 35 U.S.C. § 134.

According to appellants, the invention is directed to an improved composition for absorbing oxygen and generating carbon

¹An amendment dated Mar. 2, 2001, Paper No. 16, submitted subsequent to the final rejection, was entered by the examiner as stated in the Advisory Action dated Mar. 12, 2001, Paper No. 17.

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dioxide in a sealed container which has a high moisture content and has been the subject of a gas flush with carbon dioxide (Brief, page 2).² Appellants state that the claims should be grouped into two groups, with claims 22-29 standing or falling with claim 30 while claims 32-39 stand or fall with claim 31 (Brief, page 3). Since appellants present reasonably specific, substantive arguments for the separate patentability of claims 30 and 31 (e.g., Brief, page 14; Answer, page 2, ¶(7)), we consider each claim separately to the extent they have been argued separately. See 37 CFR § 1.192(c)(7)(2000). A copy of illustrative independent claims 30 and 31 is attached as Appendix I to this decision.

The examiner relies upon Nakamura et al. (Nakamura), U.S. Patent No. 4,384,972, issued May 24, 1983, as evidence of obviousness (Answer, page 2). Accordingly, the claims on appeal stand rejected under 35 U.S.C. § 103(a) as unpatentable over Nakamura (*id.*). We *affirm* the examiner's rejection of claims 31-39 essentially for the reasons stated in the Answer, our decision in Appeal No. 1995-3770, and those reasons set forth below. We reverse the examiner's rejection of claims 22-30 essentially for the reasons stated in the Brief, Reply Brief, the decision in

²All reference to and citation from the Brief refers to the Substitute Brief dated Mar. 19, 2001, Paper No. 18.

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related Appeal No. 1996-2901, and those reasons set forth below. Accordingly, the decision of the examiner is affirmed-in-part.

OPINION

A. Background

This application is a continuation of application no. 08/088,405, in which a merits panel of this Board issued a decision affirming the examiner's rejection of claims 22 through 39 under 35 U.S.C. § 103(a) over Izumimoto et al. (Izumimoto), U.S. Patent No. 4,762,722, issued Aug. 9, 1988 (see the decision dated Aug. 31, 1998, in Appeal No. 1995-3770, with a Request for Rehearing denied, see Paper No. 29 mailed Sep. 28, 1999). For purposes of comparison, we attach a copy of claims 30 and 31 from Appeal No. 1995-3770 as Appendix II to this decision.

This application is also related to application no. 08/072,879 (see the Brief, page 1), in which a merits panel of this Board issued a decision reversing the examiner's rejection of claims 1 through 20 under 35 U.S.C. § 103(a) over Nakamura in view of Gammill et al. (Gammill, U.S. Patent No. 2,819,491, issued Jan. 14, 1958) (see Appeal No. 1996-2901, with the decision mailed on Sep. 28, 2000, as Paper No. 20). For comparison purposes, a copy of claim 1 from this appeal is also attached as Appendix III to this decision.

B. The Sealed Container Claim 30

Appealed claim 30 is written in a Jepson-type format and requires a sealed container, a product which may be deleteriously affected by oxygen, an atmosphere which contains oxygen and carbon dioxide as a result of a carbon dioxide flush, and as the improvement a stable composition of at least five specific ingredients (see the claim construction for claim 30, of similar scope, on pages 8-9 of the decision in Appeal No. 1995-3770, Paper No. 27).

The examiner finds that Nakamura discloses a sealed container for preserving foods in the presence of a composition containing five ingredients within the scope of claim 30 on appeal (Answer, page 2). Although the examiner finds that Nakamura teaches broad ranges for each ingredient and fails to teach the water content of the water adsorbent, the examiner concludes that it would have been well within the ordinary skill in the art to select amounts within the broad ranges of Nakamura "to optimize the properties" and to start with a dry water adsorbent since the reference teaches that the package should be kept dry (Answer, paragraph bridging pages 2-3).

We determine that the examiner has failed to address the limitations of claim 30 as discussed above and as construed in our

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previous decision in Appeal No. 1995-3770. The method of claim 1 in Appeal No. 1996-2901 contains the same limitation regarding a carbon dioxide flush as found in claim 30 in this appeal. Therefore, we adopt our remarks on pages 4-6 of the decision in Appeal 1996-2901 regarding Nakamura, i.e., that Nakamura does not disclose or suggest gas flushing *and* addition of an antioxidant/deoxygenating composition, but teaches the disadvantages of using nitrogen or carbon dioxide sealed into the interior of evacuated packages. Accordingly, we determine that the examiner has not shown that Nakamura discloses or suggests all of the limitations of claim 30 on appeal.

For the foregoing reasons, we determine that the examiner has failed to present any factual basis for the conclusion of obviousness. Accordingly, we cannot sustain the examiner's rejection of claim 30, and claims 22-29 which stand or fall with claim 30, under 35 U.S.C. § 103(a) over Nakamura.

C. Composition Claims 31-39

Composition claim 31 recites a stable composition for absorbing oxygen and releasing carbon dioxide in a high moisture environment that requires five components (see the decision, pages 3-4, in Appeal No. 1995-3770). The examiner, as discussed above with respect to claim 31, finds that Nakamura discloses overlapping

amounts of the same five ingredients as broadly recited in claim 31 (Answer, page 2). The examiner further finds that the reference fails to disclose the amount of moisture in the dry water-attracting means but concludes that the claimed amount of moisture would have been obvious in view of the teachings of Nakamura that the package should be kept dry and the knowledge in the art that an artisan would have kept the adsorbent dry at the start of the process so that it did not become saturated (Answer, page 3).

Appellants acknowledge that claim 31 is directed to the specific composition *per se* which forms a part of claim 30 (Brief, page 14). However, appellants submit that claim 31 contains all of the limitations of "the composition of claim 30" and thus the same arguments with respect to claim 30 are equally applicable to claim 31 (*id.*).

Appellants are correct that the composition of claim 31 contains all the limitations of the composition as recited in the improvement clause of claim 30. However, the scope of these two claims are not the same, as discussed below and on pages 3-8 of our decision in Appeal No. 1995-3770. As construed in our previous decision in Appeal No. 1995-3770 and discussed by the examiner in this appeal (Answer, pages 3-4), composition claim 30 merely recites the five essential ingredients along with many statements

of intended use, i.e., limitations that the composition must be capable of operation in a certain manner. As held by a predecessor of our reviewing court, "[t]hese terms merely set forth the intended use for, or a property inherent in, an otherwise old composition." *In re Pearson*, 494 F.2d 1399, 1403, 181 USPQ 641, 644 (CCPA 1974). These terms do not differentiate the claimed composition from those known to the prior art, but only define a context in which the invention operates. See *Griffin v. Bertina*, 285 F.3d 1029, 1033, 62 USPQ2d 1431, 1434 (Fed. Cir. 2002).

Appellants argue that in Nakamura the water is generated in the container by a chemical reaction of the components of the composition, but is not adsorbed from the high moisture content of the container as claimed (Brief, pages 5 and 8-9). Appellants' argument is not persuasive since, as discussed above, composition claim 31 does not require operation in a high moisture environment, only the capability of such operation. Since each ingredient of the Nakamura composition arguably falls within the scope of the claimed composition, the Nakamura composition must have the capability of operating in the same environment as claimed. Additionally, we disagree with appellants' interpretation of Nakamura (Brief, pages 8-9, citing col. 3, l. 57 *et seq.*, and col. 4, l. 1 *et seq.*). It is clear from these citations that Nakamura

teaches that the water required for the oxygen-absorbing reaction may be gathered from the "water retained in the package by the deliquescent substance" (col. 3, ll. 57-62), where the deliquescent substance is defined by Nakamura as a substance in the composition that "serves to adsorb water naturally existing in the interior atmosphere of [the] package" (col. 4, ll. 1-3). Accordingly, we determine that Nakamura teaches the same mode of operation as recited in the functional language of the claims on appeal.

Appellants present several arguments concerning the deliquescent component of the composition of Nakamura, i.e., that calcium chloride is used as a hydrate and thus would supply water to the composition prematurely (Brief, page 9), that the examiner has no basis for stating that the Nakamura package should be kept "dry" (Brief, page 10), and that the deliquescent component of Nakamura was not used for the same purpose as appellants' "dry water-attracting means" (Brief, pages 11-13).

These arguments are not persuasive. Appellants have not presented any convincing evidence or reasoning to support their allegation that the two waters of hydration attached to the calcium chloride would "supply" water to prematurely activate the composition. See *In re Scarborough*, 500 F.2d 560, 566, 182 USPQ 298, 302 (CCPA 1974) (Generally held that attorney argument is

insufficient to take the place of evidence or expert testimony). Furthermore, we note that many compositions of Nakamura use activated charcoal as an adsorbent and do not include calcium chloride (see Table 1).

We note that Nakamura is silent with regard to the moisture content of the deliquescent component (Answer, page 3). Therefore we determine that it would have been reasonable to one of ordinary skill in this art that the moisture level was 0%, or as low as commercially possible. As stated by the examiner, one of ordinary skill in this art would have desired as low a water content as possible when using a deliquescent component to adsorb water from the environment (*id.*).

As discussed above, we determined that Nakamura uses the deliquescent material for the same purpose as stated in appellants' claims for the "dry water-attracting means". However, regardless of the purpose, the use of such materials is disclosed and exemplified by Nakamura.

For the foregoing reasons and those stated in the Answer, and the decision in Appeal No. 1995-3770, we determine that the examiner has established a *prima facie* case of obviousness in view of the reference evidence. Based on the totality of the record, including due consideration of appellants' arguments, we determine

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that the preponderance of evidence weighs most heavily in favor of obviousness within the meaning of section 103(a). Therefore we affirm the examiner's rejection of claim 31, and claims 32-39 which stand or fall with claim 31, under 35 U.S.C. § 103(a) over Nakamura.

D. Other Issues

The examiner in this appeal has inexplicably withdrawn any rejection based on Izumimoto, even though a rejection based on this reference was affirmed in parent Appeal No. 1995-3770. In the event of further or continuing prosecution before the examiner, based on our similar claim construction for the claims in this appeal and the claims of Appeal No. 1995-3770, the examiner should reconsider the patentability of the claims in this application in view of Izumimoto.

E. Summary

The examiner's rejection of claims 22-30 under 35 U.S.C. § 103(a) over Nakamura is reversed.

The examiner's rejection of claims 31-39 under 35 U.S.C. § 103(a) over Nakamura is affirmed.

Accordingly, the decision of the examiner is affirmed-in-part.

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No time period for taking any subsequent action in connection
with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

CHUNG K. PAK)	
Administrative Patent Judge)	
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)	
)	
)	BOARD OF PATENT
THOMAS A. WALTZ)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
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BEVERLY A. PAWLIKOWSKI)	
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APPENDIX I

30. In a sealed container which contains a product which may be deleteriously affected by oxygen and which contains oxygen and carbon dioxide as a result of a carbon dioxide flush and which has a high moisture content, the improvement of a stable composition for absorbing oxygen and releasing carbon dioxide but which will not absorb oxygen and release carbon dioxide until after it has been placed in said high moisture container which is subsequently sealed comprising by weight an iron-based component in an amount of between about 15% and 60%, a carbon dioxide releasing component in an amount of between about 8% and 50%, a solid electrolyte material, a dry acidifying component, and dry water-attracting means containing not more than about 3% moisture for maintaining said stable composition dry until it is placed into said high moisture container and thereafter adsorbing moisture from said high moisture content of said sealed container and providing said moisture to both said solid electrolyte material and said dry acidifying component to thereby activate said solid electrolyte material to combine with said iron-based component to absorb oxygen and also activate said acidifying component to combine with said carbon dioxide releasing component to cause it to release carbon dioxide, said activation of said solid electrolyte material and said dry acidifying component occurring only after said dry water-attracting means adsorbs sufficient of said moisture from said sealed container thus avoiding premature activation of said oxygen-absorbing component and said carbon dioxide releasing component.

31. A stable composition for absorbing oxygen and releasing carbon dioxide in a high moisture environment of a sealed container which contains oxygen and carbon dioxide as a result of a carbon dioxide flush but which will not absorb oxygen and release carbon dioxide until after it has been placed in a high moisture container which is subsequently sealed comprising by weight an iron-based component in an amount of between about 15% and 60%, a carbon dioxide releasing component in an amount of between about 8% and 50%, a solid electrolyte material, a dry acidifying component, and dry water-attracting means containing not more than about 3% of moisture for maintaining said stable composition dry until it is placed into said high moisture environment of said container and sealed thereby stabilizing said composition against premature absorption of oxygen and premature generation of carbon dioxide until it adsorbs moisture from said high moisture environment of

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said sealed container and provides said moisture to both said solid electrolyte material and said dry acidifying component to thereby activate said solid electrolyte material to combine with said iron-based component to absorb oxygen and to also activate said dry acidifying component to combine with said carbon dioxide releasing component to cause it to release carbon dioxide.

APPENDIX II

30. In a sealed container which contains a product which may be deleteriously affected by oxygen and which contains oxygen and carbon dioxide as a result of a carbon dioxide flush and which has a high moisture content, a stable composition for absorbing oxygen and releasing carbon dioxide comprising by weight an iron-based component in an amount of between about 15% and 60%, a carbon dioxide releasing component in an amount of between about 8% and 50%, a solid electrolyte material, a dry acidifying component, and a dry water-attracting component for attracting moisture from said high moisture content and providing such moisture to both said solid electrolyte material and said dry acidifying component to thereby activate said solid electrolyte material to combine with said iron-based component to absorb oxygen and also activate said acidifying component to combine with said carbon dioxide releasing component to cause it to release carbon dioxide, said activation of said solid electrolyte material and said dry acidifying component occurring only after said dry water-attracting component adsorbs sufficient of said moisture from said container thus avoiding premature activation of said oxygen-absorbing component and said carbon dioxide releasing component.

31. A composition for absorbing oxygen and releasing carbon dioxide in a high moisture environment which contains oxygen and carbon dioxide as a result of a carbon dioxide flush comprising by weight an iron-based component in an amount of between about 15% and 60%, a carbon dioxide releasing component in an amount of between about 8% and 50%, a solid electrolyte material, a dry acidifying component, and a dry water-attracting component for stabilizing said composition against premature absorption of oxygen and premature generation of carbon dioxide until it adsorbs moisture from said high moisture environment and provides said moisture to both said solid electrolyte material and said dry acidifying component to thereby activate said solid electrolyte material to combine with said iron-based component to absorb oxygen and to also activate said dry acidifying component to combine with said carbon dioxide releasing component to cause it to release carbon dioxide.

APPENDIX III

1. A method of removing oxygen from a container having a product and a high moisture environment and wherein oxygen was previously flushed out of said container and replaced by a gas containing carbon dioxide and wherein some oxygen may have remained and into which additional oxygen may have entered comprising the steps of providing a container, placing a product which produces a high moisture environment into said container, flushing the container with carbon dioxide to remove other gases from said container, sealing said container, and inserting into said container which has a high moisture environment after said flushing step and before said sealing step a mixture of an oxygen-absorbing component for absorbing oxygen from said container, a carbon dioxide generating component for generating carbon dioxide in said container, an acidifying component for activating said carbon dioxide generating component, and a dry water-attracting component for stabilizing the mixture against premature oxygen absorption and premature carbon dioxide generation before the mixture has been placed into said high moisture environment in said container and thereafter attracting moisture from the high moisture environment and supplying said moisture to said oxygen-absorbing component and said carbon dioxide generating component to thereby activate said oxygen-absorbing component to absorb said oxygen and also activate said acidifying component to combine with said carbon dioxide generating component to cause it to generate carbon dioxide.

